

## ABSTRACT OF THE DISCLOSURE

[0038] A system and method for generating a sequence of  $2D$  addresses, the sequence having the property of a Hamming distance of one between consecutive addresses and the circular property, where  $D$  is an arbitrary integer. A sequence of length equal to the next power of 2, from  $2D$ , is used to determine the sequence of  $2D$  addresses. The sequence of addresses is used in an asynchronous first-in-first-out (FIFO) data structure, which may include, for example, a FIFO memory having a depth  $D$  and a code generator coupled to the FIFO memory. The first code sequence may be generated from a second code sequence by removing one or more pairs of mirrored codes of the second code sequence.